

**REMARKS**

In view of the above amendments and the following remarks, reconsideration and further examination are requested.

By this amendment, claims 39-43 have been canceled in favor of new claims 44-91. Thus, claims 44-91 are pending.

Claims 39-43 were rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-5 of U.S. Patent No. 6,256,357. This rejection is traversed and is inapplicable to new claims 44-91.

In the inventions recited in new claims 44-91, modulation/demodulation on the first and second data streams is performed according to m-level PSK/n-level PSK or m-level QAM/n-level QAM, respectively. Moreover, claims 44-91 include recitations that the first data stream has information of the value n. Claims 52, 56, 60, 64, 76, 80, 84, and 88 include recitations drawn to demodulation to produce the first data stream and the second data stream, wherein the second data stream is produced according to the information of the value of n. Claims 1-5 of U.S. Patent No. 6,256,357 do not recite such a modulation/demodulation arrangement. Therefore, claims 44-91 are not obvious in view of claims 1-5 of U.S. Patent No. 6,256,357.

Claims 39-43 were also provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 39-49 of copending application no. 09/705,843. This rejection is traversed and is inapplicable to new claims 44-91.

The claims of copending application no. 09/705,843 have been substantively amended. The new claims in copending application no. 09/705,843 are drawn to an invention including BCH encoding/decoding applied to a first data stream and Reed-Solomon encoding/decoding applied to a second data stream. Moreover, the claims in copending application no. 09/705,843 are not drawn to inventions in which the first data stream has information of the value n as recited in the present application. Accordingly, it is submitted that claims 44-91 are not obvious in view of the claims of copending application 09/705,843.

Claims 39-43 were also provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over the claims of copending applications nos. 09/678,014, 09/677,421, and 09/680,177 in view of Hulyalkar et al. These

rejections are traversed and are inapplicable to new claims 44-91.

The claims in application no. 09/678,014 have been substantively amended and are drawn to an invention that is quite different than the invention recited in the present application. The claims in application no. 09/678,014 are drawn to an invention in which a bias generator is operable to bias an m-level ASK modulated signal and an n-level ASK modulated signal to produce a biased signal, a recorder is operable to output the biased signal to a recording medium, and a reproducer is operable to reproduce the m-level ASK modulated signal and the n-level ASK modulated signal based on information of the recording medium. Accordingly, no obvious combination of the invention claimed in application 09/678,014 with the teachings of Hulyalkar would result in the inventions recited in claims 44-91 of the present application.

With respect to application no. 09/677,421, the claims in that application do not include recitations of new claims 44-91, specifically recitations drawn to an invention in which modulation/demodulation on the first and second data streams is performed according to m-level PSK/n-level PSK or m-level QAM/n-level QAM, respectively. Moreover, claims 44-91 of the present application include recitations that the first data stream has information of the value n, and such recitations are not present in the claims of application no. 09/677,421. Claims 52, 56, 60, 64, 76, 80, 84, and 88 of the present application include recitations drawn to demodulation to produce the first data stream and the second data stream, wherein the second data stream is produced according to the information of the value of n. The claims of application no. 09/677,421 do not recite such a demodulation arrangement. Thus, no obvious combination of the invention claimed in application 09/677,421 with the teachings of Hulyalkar would result in the inventions recited in claims 44-91 of the present application.

The claims of copending application no. 09/680,177 have been substantively amended. The new claims in copending application no. 09/680,177 are drawn to an invention including BCH encoding/decoding applied to a first data stream and Reed-Solomon encoding/decoding applied to a second data stream. Moreover, the claims in copending application no. 09/680,177 are not drawn to inventions in which the first data stream has information of the value n as recited in the present application. Thus, no obvious combination of the invention claimed in application 09/677,421 with the teachings of Hulyalkar would result in the inventions recited in

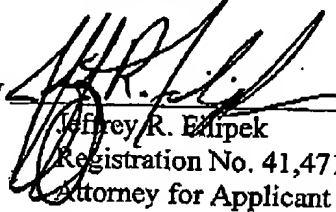
claims 44-91 of the present application.

In view of the above amendments and remarks, it is submitted that claims 44-91 are allowable over the prior art of record and that the present application is in condition for allowance. The Examiner is invited to contact the undersigned attorney by telephone to resolve any remaining issues.

Respectfully submitted,

Mitsuaki OSHIMA

By

  
Jeffrey R. Eripek  
Registration No. 41,471  
Attorney for Applicant

JRF/fs  
Washington, D.C. 20006-1021  
Telephone (202) 721-8200  
Facsimile (202) 721-8250  
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